

PCBs in Caulk—QA

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Background on PCB Exposure and Risk

What are PCBs?

Polychlorinated biphenyls, PCBs, are persistent manmade chemicals that were widely used in construction material and electrical products before 1978. In 1976, Congress banned the manufacture and use of PCBs because of concern about their health and environmental effects and they were phased out except for certain limited uses in 1978. The use and disposal of PCBs before the phase-out resulted in their widespread presence in our soil, air, water and food. Despite the federal ban, they remain present today in caulking and sealants used in the construction or renovation of older buildings before 1978.

What are the potential health effects of PCBs?

PCBs build up in our bodies over time. At any given time, most of us have very low levels of PCBs - levels that are low enough not to cause harm. High levels of exposure over a long period of time, however, can be harmful to our health.

Short term exposure to large amounts of PCBs can lead to skin conditions such as acne and rashes, decreased liver function, neurological effects, and gastrointestinal effects. These types of acute toxic effects due to high levels of exposure are generally rare. Chronic exposure to lower levels of PCBs may also cause health effects. In animal studies, PCBs have been shown to cause effects on the immune, reproductive, nervous and endocrine systems. PCBs have also been shown to cause cancer in animals. Studies in humans provide supportive evidence for these health effects. Studies also show that high levels of PCBs in pregnant women can have an impact on their children's birth weight, short-term memory, and learning.

How are people exposed to PCBs?

Though PCBs were banned from production in 1978, they still typically exist in low-levels in our environment – in the food we eat, the air we breathe and in dirt and dust – and they build up in our bodies over many years. This long-term build-up of PCBs is what potentially causes harm. The levels of PCBs in our environment and in the bodies of people in this country have decreased significantly over time.

Food is a main source of exposure to PCBs. Fish (especially fish caught in polluted waters) contains small amounts of PCBs, as do meat and dairy products. People can also be exposed to PCBs by handling products that contain them, or by breathing in

contaminated air or dust in areas where a product containing PCBs was disturbed or disposed. Workers whose jobs involve repairing or dismantling PCB-containing products are at the highest risk for exposure in this way. Indoor air and dust may also be a significant source of PCB exposure from PCB-contaminated caulk, electrical products, other building materials or products that contain PCBs.

What do we know about dietary ingestion of PCBs?

PCB concentrations in U.S. foods are generally decreasing. However, despite significant reductions, the dietary ingestion of PCBs remains the single largest source of PCBs for most members of the U.S. population. Meats, fish and dairy products generally contribute the most to the total dietary intake of PCBs.

How do PCBs persist in the environment and bioaccumulate in people?

PCBs continue to be present indoors in buildings, and outdoors in cities and even remote wilderness locations more than thirty years after their production was banned in the United States. PCBs are stored in the fat of animals and humans, which means that humans may be exposed to PCBs through their diet when eating fish, dairy products or meat.

Although there are multiple sources of exposure to PCBs, isn't food the highest exposure?

Generally, this is true. However, PCBs are widespread in the environment and people are potentially exposed through multiple pathways. Levels in air, water, sediment, soil, and food vary over several orders of magnitude, often depending on proximity to a source of release into the environment. Estimates of average daily intake via diet vary widely depending on geographic area and eating habits. People whose diet is high in some types of fish, game animals, or products of animals contaminated through the food chain will have higher exposures to PCBs. People exposed to elevated air or dust levels may also have higher levels, although research to determine the relationship between these routes of exposure and PCB levels in human blood and tissue is lacking.

Should I be concerned about PCB exposures?

Though this is a serious issue, the potential presence of PCBs in buildings should not be a cause for alarm – there are steps building owners can take to protect students, teachers and others, as described in EPA's Fact Sheet and later in these Q&As. .

PCB-Containing Caulk in Schools and other Buildings

What is known about use of PCBs in caulk?

PCBs were used widely in caulking and elastic sealant materials, particularly from 1950

through the 1970s. These materials were primarily used in windows, door frames, stairways, masonry columns, and other masonry building materials. PCBs were used in these building materials because of its properties as a plasticizer.

What PCB levels have been detected in caulk from this time period?

PCBs have been detected in caulk in buildings, including schools, with concentrations ranging from as low as 50 ppm to as high as 300,000 ppm. In some cases, PCBs were used in caulk with a concentration as high as 30%.

What percentage of schools and other buildings constructed between 1950 and 1978 contain PCB-contaminated caulk?

No national survey of PCBs in caulk has been conducted so EPA does not have precise information on the prevalence of PCB-containing caulk in schools and other buildings. Based on the small number of test samples gathered from different parts of the country and because of its excellent properties as a plasticizer, EPA believes that the presence of such caulk in schools and other buildings built or renovated in this period could be widespread. This is why EPA is alerting the public to this issue and providing information on how to address this concern.

What about caulk in single-family houses or other places?

EPA has found PCBs in large scale apartment complexes and public buildings. To date, EPA has not found PCBs in caulk in single-family houses, although the use of PCB contaminated building materials in residences is not well-documented. There is a limited published literature indicating that PCBs may be found in single-family homes, but generally at air concentrations below the public health exposure levels developed by EPA and noted in this announcement.

Aren't there reports that PCB-containing caulk may have been used in public drinking water systems?

Yes, PCBs have been found in public drinking water basins in California and Colorado. In each case, the caulk was removed and replaced. The water in these basins is also being regularly tested to make sure that there is no residual PCB contamination.

Exposure to PCBs from Caulk in Schools and other Buildings

What are potential sources of PCBs in schools and buildings?

Potential sources of PCBs in buildings built or renovated between about 1950 and 1978 include caulking used around windows, door frames, masonry columns and other masonry building materials. This caulk may be present inside and on the exterior of the building as well as surrounding surfaces. PCBs may also have been used in building

expansion joints, mastics and other adhesives and in the manufacture of some ceiling tiles and other acoustic boards. These are all potential primary sources of PCBs in buildings and schools. PCBs from primary sources can lead to elevated concentrations of PCBs in indoor air that later adsorb or leach onto other surfaces, which then become secondary sources of PCBs. These secondary sources can cause elevated indoor concentrations even when primary sources have been removed.

Why is the Caulk a Potential Source of Exposure?

When contaminated caulk is disturbed, or deteriorates with age, it produces dust that may contain PCBs. This dust can be inhaled, touched or ingested through normal hand-to-mouth contact, particularly by young children. There have been reports of school buildings where exterior caulk has peeled off and contaminated the surrounding soil, and the soil was removed to protect children from unsafe exposure. It is possible that PCBs may be released to air from intact, undisturbed caulk through off-gassing, although the mechanism for such release is not well-understood.

What do we know about PCB concentrations in the indoor air in those schools constructed or renovated using PCB contaminated building materials?

Although we do not have extensive data on indoor air concentrations in schools and buildings, elevated levels of PCBs in air have been measured inside schools and other buildings. The measurements from reported studies indicate that PCB indoor air concentrations are highly variable from school to school, and from room to room within the same school. Measured air concentrations depend upon many factors including the source or sources of PCBs, the age and condition of building materials, and building ventilation rates. Measured values range from a few nanograms (one nanogram = one billionth of a gram) per cubic meter to several hundred nanograms per cubic meter. .

Are PCB Air Levels in Schools a Significant Exposure Source?

This depends on the levels present. The highest levels that have been measured would exceed the health levels that EPA has developed to define a prudent level of health protection. It is important, however, to recognize that we lack extensive data on the presence and levels of PCBs in indoor air in schools and other buildings.

What do we know about PCB concentrations in indoor dust in those schools constructed or renovated using PCB contaminated building materials?

Indoor dust is a potential source of non-dietary ingestion of PCBs and is, therefore, a potentially important route of human exposure to PCBs. While PCBs have been measured in the dust inside schools and buildings constructed or renovated using PCB contaminated building materials, the levels are not well documented. The measurements that we do have indicate that PCB concentrations in dust are highly variable from school to school, and from room to room within the same school. Indoor dusts are composed of multiple types of materials, potentially including crumbling building materials, outside soils tracked into buildings, and various kinds of organic

matter. Measured values range from less than 1 to 100 micrograms (one millionth of a gram) of PCBs per gram of dust.

Touching PCB-contaminated caulk may result in short-term exposure to PCBs. Although EPA has not yet determined what the long term effects may be from these exposures, touching caulk should be avoided as much as possible and minimizing indoor dust should be encouraged.

What do we know about PCB concentrations in the soils surrounding schools constructed or renovated using PCB-contaminated building materials?

The soils surrounding schools can be contaminated with PCBs originating from building materials. Soils contaminated with PCBs from building materials are not well understood. Generally, we would expect that higher concentrations of PCB contaminated soils would be closer to school buildings.

Planned Research

Why does EPA believe that scientific understanding of the risks associated with exposure to PCBs in caulk is presently limited?

There are a number of gaps in understanding that make it difficult to fully assess the potential risk from exposure of school children to PCB-contaminated caulk. First, although some data are available, it is not known how widely and at what levels PCBs are present in air and dust and on surfaces in schools. Second, the contribution of PCBs in caulk to levels present in air and dust and on surfaces is uncertain and the mechanisms by which PCBs might be released from caulk (through off-gassing or otherwise) are not well-understood. For example, it is not clear whether intact as compared to damaged caulk is a major release pathway, making it difficult to determine whether all caulk should be removed. It is also unclear how releases from caulk compare to releases from other PCB sources in the school environment.

What research is EPA doing to fill these gaps?

EPA research on PCBs in schools is being designed to identify and evaluate potential sources of PCBs in order to better understand exposures to children, teachers, and other school workers, and to improve risk management decisions. EPA will investigate PCB-contaminated caulk, as well as other potential sources of PCBs in schools. Specifically, EPA's Office of Research and Development will:

- characterize potential sources of PCB exposures in schools (caulk, coatings, adhesives light ballasts, etc.)
- investigate the relationship of these sources to PCB concentrations in air, dust, and soil
- evaluate methods to reduce exposures to PCBs in caulk and other sources.

When will the results of this research be available?

EPA plans to begin laboratory work this year. Once testing is complete, EPA will prepare a summary report that combines results from the EPA studies with information from the literature. The report will be available to the public. The information will also be used by EPA to develop guidance on mitigation methods for PCB-containing caulk and to inform future risk management decisions. The field study is planned to begin once schools have been identified and access has been granted. It is expected that the research will be completed in 12 to 18 months. A critical element for success of the field research effort will be for EPA to identify schools that will participate in the research study.

Measures to reduce PCB exposure in Schools or Other Buildings

Are my children in danger if my school or building has PCB-containing caulk?

PCBs may cause serious harm when exposure occurs over a long period of time. That is why EPA has recommended a goal of minimizing students' and teachers' exposure to PCBs. It should be recognized that exceeding EPA's levels for a school exposure does not mean that adverse effects will necessarily occur. Because PCBs accumulate over such long averaging times, short term exceedances of the levels will likely cause only small changes to human blood concentrations, and these can be offset by other periods of exposure to lower air levels. Comparing total exposure from all sources to the levels is a conservative, health protective estimate, as it assumes that most of the inhaled PCB is absorbed and none exhaled. Some past research suggests that not all inhaled PCB is absorbed in the body. Studies conducted in Europe where children and teachers were exposed to higher PCBs levels (more than 1,000 nanogram/m³) in schools have shown that these exposures contributed very little to the overall PCB blood levels.

What are the best near-term actions to reduce PCB exposures in buildings with PCB-containing caulk?

It is important to minimize exposure to PCBs from caulk and its residues through inhalation, skin contact or ingestion. Where schools or other buildings were built or renovated between 1950 and 1978, EPA recommends the following best practices to minimize exposure:

- Improve ventilation and add exhaust fans
- Clean frequently to reduce dust and residue inside buildings
- Use a wet or damp cloth or mop to clean surfaces
- Using vacuums with high efficiency particulate air filters
- Do not sweep with dry brooms; minimize the use of dusters near areas with caulk
- Wash children's hands with soap and water often, particularly before eating
- Wash children's toys often

- Wash hands with soap and water after cleaning, and before eating or drinking.

Should air be tested for the presence of PCBs in schools and buildings?

School administrators and building owners should also consider testing to determine if PCB levels in the air exceed EPA's suggested public health levels. If testing reveals PCBs in the air above these levels, schools should be especially vigilant in implementing and monitoring practices to minimize exposures. EPA has calculated prudent public health levels that maintain PCB exposures below the "reference dose" – the amount of PCB exposure that EPA does not believe will cause harm. Further explanation of this dose and EPA's public health levels is included further down in this document in the "Suggested Concentrations of Indoor Air" section.

In short, EPA developed a reference dose (RfD) of 20 ng PCB/kg body weight per day. Maximum values are based upon EPA's understanding of average exposure to PCBs from all other major sources. Maximum concentration values were developed for all ages of children from toddlers in day-care to adolescents in high school as well as for adult school employees.

What do I do if PCBs are found in air?

If PCBs are found in the air at levels above maximum concentration values, EPA will work with school administrators or building owners to develop a plan to minimize exposures including, where necessary, plans to remove the PCB contaminated caulk.

If elevated air levels of PCBs are found, schools should also have the ventilation system evaluated to determine if it is contaminated with PCBs. Although the ventilation system is unlikely to be an original source of PCB contamination, it may have been contaminated before other sources of PCBs were removed from the school and may be contributing to elevated air levels. Contaminated ventilation systems should be carefully cleaned. Ideally, such cleaning should be planned in concert with removal of any sources of PCBs that are found to avoid re-contamination of the system.

Building owners or managers should also consider air monitoring after they have removed the caulk or taken other remedial actions to determine if inhalation exposure is still a concern. If the air monitoring shows elevated levels remain, there may be another source of PCBs other than in the caulk that may need to be investigated.

Does deteriorating caulk require special attention?

Yes. EPA specifically recommends that schools test the caulk for PCBs if it is deteriorating or flaking. The caulk should be replaced if significant levels of PCBs are measured.

Should students and teachers be removed from buildings with elevated levels of PCBs in the air?

EPA does not believe evacuation is generally necessary. Since possible health effects are the result of cumulative exposure over long periods, elevated exposures for brief periods should be acceptable. If PCBs are found in air at levels above EPA's public health targets, the number one priority should be to reduce exposures as soon as possible.

Should PCBs be removed during building repair and renovation activities?

Yes. Where schools or other buildings were constructed or renovated between 1950 and 1978, EPA recommends that PCB-containing caulk be removed during planned renovations and repairs (when replacing windows, doors, roofs, ventilation, etc.) EPA recommends testing caulk that is going to be removed as the first step in order to determine what protections are needed during removal. Where testing confirms the presence of PCBs, it is critically important to ensure that they are not released to air during replacement or repair of caulk in affected buildings. EPA is recommending simple, commonsense work practices to prevent the release of PCBs during these operations.

What special procedures are needed when doing repairs that may disturb PCB-containing caulk?

When PCB-containing caulk is removed and disposed of, it can contaminate surrounding surfaces. If repairs are necessary in areas that may contain PCBs, schools should test the caulk to determine whether it contains PCBs at or greater than the regulatory threshold. Repairs that disturb PCB-containing caulk, such as window removal and replacement, should be conducted by trained workers who use safe work practices to minimize dust and contain contaminated waste. Once the window replacements have been completed, the area should be thoroughly cleaned using recommended methods. EPA has developed guidance for minimizing exposures when conducting remediation and renovation activities.

Steps contractors should take include:

- Ensure workers are properly trained and are using gloves, eye goggles, skin protection and approved particulate breathing masks,.
- In dusty work areas, have showers available and separate changing areas so that dust on clothing is not brought home.
- If working with solvents, provide respirators.
- Cover work areas with plastic.
- Use heavy plastic sheeting to cover floors and other fixed surfaces like large appliances in the work area.
- Close and seal vents in the work area and, if necessary, turn off forced-air heating and air-conditioning systems.
- Regularly clean the work area with industrial (HEPA) vacuum and wet mopping.
- Properly dispose of personal protective equipment and cleaning material.

Why shouldn't all schools be testing all caulk to determine whether it contains PCBs?

The regulations do not require testing for PCBs. While testing the caulk to determine whether PCBs are present is useful in some instances, EPA at this time recommends air testing as the next step for schools that are concerned about potential risks and wish to supplement the protections provided by EPA's recommended best practices. As EPA gains new information from ongoing research, it will make further recommendations regarding testing and removal of PCB-containing caulk. School administrators and building owners should consider testing to determine if PCB levels in the air exceed EPA's suggested public health levels, and if caulk is peeling, brittle, cracking or visibly deteriorating, EPA recommends it be tested directly for the presence of PCBs.

How will the results of research affect EPA's recommendations?

Research conducted by EPA and others will clarify three issues: 1) characterize potential sources of PCB exposures in schools (caulk, coatings, mastics and adhesives, light ballasts, etc.); 2) investigate the relationship of these sources to PCB concentrations in air, dust, and soil; and, 3) evaluate methods to reduce exposures to PCBs in caulk and other sources.

This research will result in additional EPA recommendations on how best to reduce risk and exposure from PCBs in schools and other buildings. For example, EPA may provide new guidance on testing for the presence of PCBs in schools and the most cost-effective remedy when PCBs are present.

What procedures should I use if my school or building will be conducting air testing?

For determining the presence of PCBs in indoor air, EPA has two approved methods: Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air – Compendium Method TO-4A (high air volume) and Compendium Method TO-10A (low air volume). These two methods can be found respectively at:

www.epa.gov/ttnamti1/files/ambient/airtox/to-4ar2r.pdf and
www.epa.gov/ttnamti1/files/ambient/airtox/to-10ar.pdf

If I decide to test the caulk itself for the presence of PCBs, how should I do it?

There are several methods for determining the presence of PCBs in caulk. You can have a sample of the caulk and the surrounding materials sampled and tested by an analytical lab. The lab should follow the recommended approach referenced in EPA's PCB regulations, such as method 3500B/3540C from EPA's SW-846, Test Methods for Evaluating Solid Waste; or an alternative method validated under subpart Q, for chemical extraction of PCBs. For analyzing extracts, Method 8082 from EPA's SW-846

or a method validated under Subpart Q is appropriate. Alternatively, you can screen for PCBs in your caulk by use of a technique known as x-ray fluorescence, in which case, you do not need to remove the caulk but testing is instead done on site

Shouldn't contaminated caulk simply be encapsulated to prevent the release of PCBs?

EPA has not determined the effectiveness of encapsulation techniques to prevent the release of PCBs; however, we are attempting to make this determination as part of our broader PCB research program.

Why should my school system spend money on removing PCBs when we have limited funds for educational needs and we may also have lead-based paint and asbestos in our schools, which may be worse?

EPA understands that school districts have constrained resources and must balance several needs. Our recommendations are designed to be flexible and cost-effective so that schools can focus limited resources on those problems that pose the greatest risks to human health.

Nonetheless, because our bodies can be exposed to PCBs from numerous sources outside of the school (such as through the consumption of fish or meat), and because they accumulate in our bodies over time, EPA believes it is prudent to reduce potentially significant exposure to PCBs in schools. In addition, on-going use of PCBs is prohibited by Federal law. EPA encourages managers of schools and other buildings to be aware of not only PCBs but the range of chemicals that may be present in facilities of a certain age and take steps to identify whether or not they are present in specific facilities. Each of these substances are addressed through similar approaches, including identification, containment, minimizing contact, and remediation. Ideally, strategies can be developed for simultaneously addressing PCBs, lead, asbestos, and other environmental substances during maintenance, repair or remodeling activities. Through these actions, coupled with production and use restrictions and various bans, we have seen remarkable overall PCB exposure reductions in recent decades.

Why has EPA not addressed this previously?

Although EPA has been dealing with PCB-contaminated building materials for several years, more data have become available recently demonstrating the high levels at which PCBs can be found in caulk, their occurrence in a number of schools and other buildings, and their potential to migrate to the air, surrounding masonry, soil and dust. EPA believes this is an important public health issues which should be addressed.

Why is EPA announcing this now?

This is an issue that different EPA regional offices have been dealing with for years. But

because we now have more data and experience and a growing number of communities are focusing on the problem, EPA leadership believes the time has come to provide guidance and technical assistance to schools and other buildings on a national basis.

Does EPA provide any financial help to assist in the testing or removal of the caulk?

EPA does not have any specific financial assistance, loan or grant programs available for addressing PCBs in caulk; however, EPA is working with the Department of Energy to encourage the use of weatherization stimulus funds for the proper removal of PCB-contaminated windows.

Suggested Concentrations of Indoor Air

EPA PCB Exposure Estimates

What are EPA's PCB exposure estimates for the general U.S. population? How does exposure compare to the reference dose?

For background, uncontaminated air, dusts and soils, EPA estimates that average total PCB exposure ranges from approximately 3 ng PCB per kg body weight per day for adults to 14 ng/kg/day for children 1 to <2 years old. Younger children are generally more exposed per body weight due to activities that place them in greater contact with potentially contaminated dust, soils, and surfaces, and higher dietary and inhalation rates per bodyweight. At average, or background, uncontaminated concentrations, all age groups have exposures below the RfD.

What routes of exposure were considered in EPA's exposure evaluations?

The exposure routes considered included several exposure sources that can occur away from school: inhalation (indoor and outdoor), indoor dust ingestion, outdoor soil ingestion, indoor dust/soil contact, and total dietary ingestion. EPA also considered several kinds of exposures that can occur at a school: school building inhalation (indoor and outdoor), indoor dust ingestion, outdoor soil ingestion, and indoor dust/soil contact. EPA did not include direct ingestion of, or direct contact with, potentially contaminated building materials because this happens infrequently and exposure estimates were developed for averages over the course of a year.

What are the largest sources of exposure for the general population?

The largest single source of PCB exposure for most individuals in uncontaminated buildings is diet, which contributes roughly 50 to 60% to total PCB exposure. Typical indoor and outdoor air contains a small amount of PCBs and inhalation exposure accounts for another 25 to 35% of total exposure. Together, these non-school sources of PCBs generally result in exposures that are significantly below the reference dose. It is worth noting that the PCB concentrations in food have been decreasing.

Using EPA reference values, what air exposure levels does EPA consider to be health protective for different age groups?

EPA advises that total exposure to PCBs from all sources be kept below the reference dose of 20 ng/kg-day. Based upon a background scenario limiting total exposure to the RfD, EPA has developed maximum values for the concentrations of PCBs in indoor air in schools that would result in total PCB exposures below the EPA's public health target. For a typical school day, these values range from a low of 70 ng/m³ for toddlers age 1 to <2, to a high of 600 ng/m³ for high school students, age 15 to <19. Details for each age group are provided in the table below.

Maximum Concentrations of PCBs in School Indoor Air (ng/m ³)						
Assuming a background scenario of no significant PCB contamination in building materials and average exposure from other sources, these concentrations should keep total exposure below the reference dose of 20 ng/kg-day.						
Age 1-<2 yr	Age 2-<3 yr	Age 3-<6 yr	Age 6-<12 yr Elementary School	Age 12-<15 yr Middle School	Age 15-<19 yr High School	Age 19+ yr Adult
70	70	100	300	450	600	450

For exposure estimates, what assumptions is EPA making about the amount of time children spend in school?

EPA assumed typical values for the number of days per year and the number of hours per day children spend at school. Depending upon age, these values were 180 to 185 days per year, and 6.5 to 8 hours per day at school. However, exposure assessments can also be made with other values that reflect school-specific activities.

Again, school administrators and building owners should also consider testing to determine if PCB levels in the air exceed EPA's suggested those levels. If testing reveals PCBs in the air above these levels, schools should be especially vigilant in implementing and monitoring practices to minimize exposures. Schools are encouraged to retest to determine whether these practices are reducing the potential for PCB exposures. Should these practices not reduce exposure, caulk and other known sources of PCBs should be removed as soon as practicable.

What are the limitations of EPA's exposure estimates?

EPA exposure values are estimates based upon PCB concentrations in environmental media (air, dust, soils) and average contact rates. Because PCB concentrations in environmental media are not well understood and may be variable, depending upon school-specific conditions, exposure estimates should be used with an appreciation of the uncertainty surrounding the estimates. The values do not consider the direct ingestion of, or contact with, PCB contaminated building materials; this route would generally be infrequent and would be an activity not shared by many individuals. These values should not be used to estimate occupational exposure associated with building or site clean-ups.

EPA's Enforcement Approach for PCB-Contaminated Caulk

Don't the regulations prohibit caulk containing PCBs above 50 ppm? Will EPA require all such caulk to be removed?

EPA regulations implementing the Toxic Substances Control Act (TSCA) prohibit the use of PCBs at levels above 50 ppm, including continued use in caulk that is already in place. While TSCA regulations do not require building owners to test caulk for PCBs, if testing shows PCB concentrations above the regulatory limit, then the regulations require the removal of those PCBs. Schools that are planning renovations or repairs should take the opportunity to test for PCBs and remove caulk found above the regulatory limit. EPA is studying the extent of the risk and the effectiveness of measures to limit exposure and will be developing further recommendations for the best approach to reduce risk from PCBs in schools. For now, school districts should ensure that schools implement the best management practices recommended today.

Does EPA intend to enforce the requirement that caulk above 50 ppm be removed?

Although EPA does have enforcement tools which it can use as appropriate where the PCB concentration in the caulk is above the regulatory limit, EPA is most interested in ensuring that schools undertake the recommended steps it has announced today. EPA believes that enforcement may not be the most effective tool to reduce health risks where schools are following these recommendations. Thus, such schools will in most cases be a low priority for enforcement. Nonetheless, EPA will not hesitate to act in situations where there are significant risks to public health.

Should schools speak with EPA about their potential enforcement exposure?

A school's top priority should be to implement the best practices described elsewhere in this announcement to minimize exposure as soon as possible. Schools do not need to enter into an agreement with EPA to implement these actions. However, for school administrators or others who want to formalize their actions, EPA will make available a streamlined model administrative consent order confirming the school's commitment to implement the current EPA recommendations.

If the 50 ppm regulatory standard applies to PCB levels as contained in the caulk, why are you telling people to test the air?

Where schools or building owners are concerned about PCB exposure and want to supplement EPA's best management practices, testing the air is the most meaningful way of assessing the potential for exposure and risk.

Does EPA have authority to require testing for PCBs – in caulk or air?

EPA regulations do not require schools to test for PCBs in caulk or air, although it encourages testing in certain circumstances as noted above. EPA retains authority to obtain an order to address situations presenting an imminent hazard.

What will EPA do if schools don't test? Or if they test and find PCBs well above 50 ppm in the caulk or above EPA's risk thresholds in the air?

EPA regulations do not require schools to test for PCBs, but EPA encourages schools to conduct air testing where PCB use is suspected and to take action to reduce exposure where EPA's public health levels are exceeded. Although EPA does have enforcement tools which it can use as appropriate where the PCB concentration in the caulk is above the regulatory limit, EPA is most interested in ensuring that schools undertake the recommended best management practices it has announced today. EPA believes that enforcement is generally not the most effective tool to reduce health risks where schools are following these recommendations. However, EPA will consider its enforcement options where PCBs in schools or other buildings present serious risks to public health that are not being addressed.